

METHOD OF USING PYRUVATE AND/OR ITS DERIVATIVES FOR THE
TREATMENT OF CYTOKINE-MEDIATED INFLAMMATORY CONDITIONS

ABSTRACT OF THE DISCLOSURE

This invention is directed to a method of using a therapeutic composition
5 comprising a compound of an alpha-ketoalkanoic acid (pyruvate) and/or its derivatives
for the treatment of cytokine-mediated inflammatory conditions. The compound is an
alpha-ketoalkanoic acid, a physiologically acceptable salt of an alpha-ketoalkanoic acid,
an ester of an alpha-ketoalkanoic acid, or an amide of an alpha-ketoalkanoic acid. A
component for inducing and stabilizing the enol resonance form of the ester at
10 physiological pH values is also disclosed. The cytokine-mediated inflammatory
conditions are mediated by, for example, an “early” (Tumor Necrosis Factor (TNF),
interleukin-1 β (IL-1 β)) or “late” (high mobility group B-1 (HMGB-1)) mediator of
inflammation. Exemplary cytokine-mediated inflammatory conditions include, but are
not limited to, local and systemic inflammation, inflammatory bowel disease (Crohn’s
15 disease and ulcerative colitis), rheumatoid arthritis, asthma (including status
asthmaticus), sepsis or septic shock, also including inflammatory skin conditions, for
example, psoriasis and eczema.